CAROLINE HERSCHEL.

BY MRS. HENRY FAWCETT.

EVERYONE knows the fame of Sir William Herschel, the first distinguished astronomer of that name, the builder and designer of the forty-foot telescope, and the discoverer of the planet called after George III., Georgium Sidus. Hardly less well-known is the name of his sister, Caroline Herschel, who was her brother's constant helper for fifty years. She was the discoverer of eight comets; she received, for her distinguished services to science, the gold medal of the Royal Astronomical Society, and the gold medal conferred annually by the King of Prussia for science; she was also made an honorary member of the Royal Astronomical Society and of the Royal Irish Academy, and received many other public marks of appreciation of the value of her astronomical labours. Few women have done as much as she for the promotion of science, and few have

been more genuinely humble in their estimate of their own attainments. Nothing made her more angry than any praise which appeared, even in the slightest degree, to detract from the reputation of her brother; over and over again she asserted that she was nothing more than a tool which he had taken the trouble to sharpen. One of her favourite expressions about herself was that she only "minded the heavens" for her brother. "I am nothing," she wrote; "I have done nothing: all I am, all I know, I owe to my brother. I am only a tool which he shaped to his use—a well-trained puppy-dog would have done as much."

Scientific men and scientific societies did not endorse Caroline Herschel's extremely humble estimate of herself. In the address to the Astronomical Society by Mr. South, on presenting the medal to Miss Herschel in 1828, the highest praise was conferred upon her as her brother's fellow-worker, and as an original observer. "She it was," said Mr. South, "who reduced every observation, made every calculation; she it was who arranged everything in systematic order; and she it was who helped him (Sir W. Herschel) to obtain his imperishable name. But her claims to our gratitude do not end here: as an original observer she demands, and I am sure she has, our unfeigned thanks." He then narrates the series of her astronomical discoveries, and adds, referring to the brother and sister: "Indeed, in looking at the joint labours of these extraordinary personages, we scarcely know whether most to admire the intellectual power of the brother, or the unconquerable industry of his sister."

The sharpest tool, or the best-trained puppy-dog in the world, could hardly have earned such praise as this. Without endorsing what Caroline said of herself in her generous wish to heighten the fame of her brother, it must, however, be conceded that in a remarkable degree she was what he made her. With an excellent, and indeed an exceptionally powerful, natural understanding, she was ready to apply it in any direction her brother chose. She was far from being a mere tool, but her mind resembled a fine musical instrument upon which her brother was able to play the lightest air or the grandest symphony, according as he pleased. At his bidding she became, first, a prima donna, then an astronomer; if he had so wished it, she would probably with equal readiness and versatility have turned her attention to any other branch of science or art.

Caroline Herschel was, indeed, a fine example of what devoted love can do to elevate the character and develop the natural capacity of the understanding. She was born in Hanover on the 16th March, 1750, the youngest but one of six children. Her exceptionally long life of nearly ninety-eight years closed in January, 1848. Her memory, therefore, included the earthquake of Lisbon, the whole French Revolution, the meteor-like rise and fall of Napoleon, and all the history of modern Europe down to the Socialistic outbreak of 1848. Her family life, before she left Germany, was of the narrowest possible kind. She had only one sister, seventeen years older than herself, and as Sophia Herschel married early, Caroline became the only girl in her family circle, and to the full was she kept to those exclusively feminine pursuits and occupations which the proprieties of Germany at that time enforced. Her mother appears to have been enthusiastically opposed to the education of girls. Her father wished to give her a good education, but the mother insisted that nothing of the kind should be attempted. How she learned to read and write we are not told in the biography written by her grand-niece, Mrs. J. Herschel. These acomplishments were by no means common among German women of the humbler middle class a hundred years ago. She did, however, acquire them in spite of her mother's decree that two or three months' training in the art of making household linen was all the education that Caroline required. Her father, who was a professional musician himself, wished to teach her music, but could only do so by stealth, or by taking advantage of half-an-hour now and then, when his wife was in an exceptionally good temper. In a letter, written when she was eighty-eight years old, Caroline recalls these furtive hours stolen from the serious occupations of her life, which then consisted in sewing, "ornamental needlework, knitting, plaiting hair, and stringing beads and bugles." "It was my lot," she writes, "to be the Cinderella of the family. . . . I could never find time for improving myself in many things I knew, and which, after all, proved of no use to me afterwards, except what little I knew of music . . . which my father took a pleasure in teaching me—*N.B., when my mother was not at home. Amen.*"

Very early in her life her brother William became Caroline's idol and hero. He was twelve years older than herself, and distinguished himself among the group of brothers for tenderness and kindness to the little maiden. Her eldest brother, Jacob, was a fastidious gentleman, and Caroline's inability to satisfy his requirements for nicety at table and as a waitress, often earned her a whipping. But her brother William's gentility was of a different order. She narrates one instance, which doubtless was a specimen of others, when "My dear brother William threw down his knife and fork and ran to welcome and crouched down to me, which made me forget all my grievances." Little did William or Caroline guess that in the kind brother soothing the little sister's trouble, the future astronomer was "sharpening the tool" that was hereafter to be of such inestimable service to him.

The connection of England and Hanover under one crown caused an intimate association between the two countries. William Herschel's first visit to England was as a member of the band of the regiment of which his father was bandmaster. On this first visit to England William expended his little savings in buying Locke's "Essay on the Human Understanding." Jacob made an equally characteristic purchase of specimens of English tailoring art. These professional journeys to England led, in the course of time, to William Herschel establishing himself as a music-master and professional musician at Bath. This, however, he very early regarded merely as a means to an end. He taught music to live, but he lived for his astronomical studies and for the inventions and improvements in telescopes which he afterwards introduced to the world. When Caroline was seventeen years old, her father died, leaving his family very ill provided for; Caroline was more closely than ever confined to the tasks of a household drudge and to endeavouring to supply home-made luxuries for Jacob. This went on for five years, the mother and sister slaving night and day in order that Jacob might cut a figure in the world not humbling to the family pride. In 1772, William Herschel unexpectedly arrived from England, and his short visit ended in his sister Caroline returning with him to Bath. She left, as she writes with some awe, even after an interval of many years, "without receiving the consent of my eldest brother to my going."

There could not possibly be a greater contrast than that between Caroline's life in Hanover and her life in England. From being a maid of all work in a not very interesting family, where there was a dull monotony in her daily routine

of drudgery, she found she was to become a public singer, an astronomer's apprentice, and an assistant manufacturer of scientific instruments; she was not only her brother's housekeeper, but his helper and coadjutor in every act of his life. Nothing is more remarkable than the account of the life of William and Caroline Herschel at Bath. He frequently gave from thirty-five to forty music-lessons a week; this, with his work as director of public concerts, kept the wolf from the door, and, needless to say, occupied his daylight hours with tolerable completeness. The nights were given to "minding the heavens," or to making instruments necessary for minding them much more efficiently than had hitherto been possible. Every room in the house was converted into a workshop. William Herschel literally worked on, night and day, without rest, his sister on several occasions keeping him alive by putting bits of food into his mouth while he was still working. Once when he was finishing a seven-foot mirror for his telescope, he never took his hands from it for sixteen hours. The great work of constructing the forty-foot telescope took place at Bath; and at Bath also, while still practising the profession of a music-master, Herschel discovered the Georgium Sidus, and was acknowledged as the leading authority on astronomy in England.

Up to the time of Herschel's improvements, six or eight inches used to be considered a large size for the mirror of an astronomical telescope. His first great telescope had a twelve-foot mirror. There is a most exciting account in Mrs. Herschel's Life of Caroline Herschel, of the failure of the first casting of the mirror for the thirty-foot reflector. The molten metal leaked from the vessel containing it and fell on the stone floor, pieces of which flew about in all directions as high as the ceiling. The operators fortunately escaped without serious injury. "My poor brother fell, exhausted with heat and exertion, on a heap of brick-bats." The disappointment must have been intense, but nothing ever baffled these indefatigable workers, and the second casting was a complete success.

Five years after she had joined her brother at Bath, Caroline made her first appearance as a public singer. She was very successful, and her friends anticipated that her well-cultivated and beautiful voice would become a means of providing her with an ample income. She, however, had so fully identified herself with her brother's astronomical labours, that she only regarded her musical acquirements as a means of setting him free to devote himself more completely to the real object of his life. His fame as a maker of telescopes had by this time spread all over Europe, and many scientific societies, royal persons, and other celebrities, ordered telescopes of him. On these orders he was able to realise a large profit, but Caroline always grudged the time devoted to their execution. Her aim for her brother was not that he should become rich or even well-to-do, but that he should devote himself unreservedly to advance the progress of astronomical science. She was ready to live on a crust, and to give herself up to the most pinching economies and even privations, for this end. She was the keeper of her brother's purse, and received his commands to spend therefrom anything that was necessary for herself; her thrift and self-denial may be judged from the fact that the sum thus abstracted for her own personal wants seldom amounted to more than seven or eight pounds a year.

The next great change in the life of the brother and sister took place in 1782, when William Herschel left Bath and was appointed Astronomer Royal by George the Third. His salary of only £200 a year involved a great loss of income, but this, in his eyes, was a small matter in comparison with the advantage of having his time entirely free to give up to his favourite studies. They bade farewell to Bath, and settled first at Datchet, shortly after, however, removing to Slough. Caroline had dismal visions of bankruptcy, but William was in the highest spirits, and declared that they would live on eggs and bacon, "which would cost nothing to speak of, now that they were really in the country."

Caroline was now installed as an assistant astronomer, and was given a telescope, which she calls a "seven foot Newtonian Sweeper;" and she was instructed, whenever she had an evening not in attendance on her brother, to "sweep for comets;" but her principal business appears, at this time, to have been waiting on her brother, and writing down the results of his observations; they worked quite as hard as they had done at Bath. They laboured at the manufacture of instruments all day, and at the observation of the heavens all night. No severity of weather, if the sky was clear, ever kept them from their posts. The ink often froze with which Caroline was writing down the result of her brother's observations. It has been well said that if it had not been for occasional cloudy nights, they must have died of overwork. The apparatus for erecting the great forty-foot telescope, and the iron and woodwork for its various motions, were all designed by William Herschel, and fixed under his immediate direction. His sister, in her "Recollections," wrote, "I have seen him stretched many an hour in the burning sun across the top beam, whilst the iron-work for the various motions was being fixed." The penurious salary granted to William Herschel was supplemented by special grants for the removal and the erection of all this machinery; and in 1787 Caroline's services to her brother were publicly recognised by her receiving the appointment of assistant to her brother at a salary of £50 a year. She was at all times grateful to members of the royal family for acts of kindness shown by them to her brother and herself; but it is evident that she felt that, so far as money was concerned, she had not much cause for gratitude to the royal bounty. She points out that at the time when Parliament was granting George III. the sum of £80,000 a year for encouraging sciences, £200 was considered a sufficient salary for the first astronomer of the day; and yet money could flow liberally enough in some directions, for £30,000 was at that time being spent on the altar-piece of St. George's Chapel, Windsor. Even Caroline's little salary of £50 a year was not regularly paid. It was a trial to her again to become a pensioner on her brother's purse, and it was not till nine quarters of her official salary remained unpaid, that she reluctantly applied to him for help. No wonder that in reading, after her brother's death, an account of his life and its achievements, she remarks, "The favours of monarchs ought to have been mentioned, *but once would have been enough.*"

It was after her brother's marriage, in 1788, that the majority of Caroline's astronomical discoveries were made. She discovered her first comet in 1786, her eighth and last in 1797. She was recognised as a comrade by all the leading astronomers of Europe, and received many letters complimenting her on her discoveries. One from De la Lande addressed her as "Savante Miss," while another from the Rev. Dr. Maskelyne saluted her as "My worthy sister in astronomy." Royal and other distinguished visitors constantly visited the wonderful forty-foot telescope at Slough, and either William Herschel or his sister were required to be in attendance to explain its marvels. The Prince of Orange, on one occasion, called, and left an extraordinary message "to ask Mr. Herschel, or if he was not at home, Miss

Herschel, if it was true that Mr. Herschel had discovered a new star, whose light was not as that of the common stars, but with swallow-tails, as stars in embroidery." The only glimpse we get, through the peaceful labours of Caroline's long life, of the strife and turmoil of the French Revolution, is the note she makes of the visit, to her brother's observatory, of the Princesse de Lamballe. "About a fortnight after this," the diarist observes, "her head was off." The absence of all comment upon the wonderful political events of the time is noticeable, and so also is Caroline's thinly-veiled contempt for any science less sublime than that to which she and her brother were devoted. Her youngest brother, Dietrich, was a student of the insect world. "He amuses himself with insects," she wrote to her nephew; "it is well he does not see the word *amuses*, for whenever he catches a fly with a leg more than usual, he says it is as good as catching a comet." Her brother's marriage, though far from welcome at the time it took place, was a great blessing to her; for it gave her a most tender and affectionate sister, and ultimately a nephew, the inheritor of his father's great gifts, and the being to whom, after William Herschel's death in 1822, Caroline transferred all the devoted and passionate attachment of which her nature was capable.

The great mistake of her life was going back to Germany after Sir W. Herschel's death in 1822. She was then seventy-two years of age, and the previous fifty years of her life, containing all her most precious memories and associations, had been spent in England. In this country, also, were all those who were dearest to her. Yet, no sooner was her brother dead, than she felt life in England to be an impossibility. She little thought that she had still twenty-six years to live; indeed she had long been under the impression that her end was near, but while her brother lived she kept this to herself, because she wished to be useful to him as long as she possibly could. She never really re-acclimatised herself to Germany. "Why did I leave happy England?" she often said. The one German institution she thoroughly enjoyed was the winter series of concerts and operas, which she constantly attended, and she mentions with pleasure, in her letters, that she was "always sure to be noticed by the Duke of Cambridge as his countrywoman, and that is what I want; I will be no Hanoverian." She laments the death of William IV., chiefly because, by causing a separation of the crowns of England and Hanover, it seemed to break a link between herself and the country of her adoption.

She never revisited England, but she kept up a constant communication with it by letters to her sister-in-law, her nephew, and later to her niece, Sir John Herschel's wife. At that time the post between London and Hanover was an affair of fifteen days, and letters were carried by a monthly messenger, of whose services she seldom failed to avail herself. She took the keenest interest in her nephew's distinguished career. His letters to her are full of astronomy. In 1832 he made a voyage to the Cape to observe the stars in the Southern Hemisphere. When Miss Herschel first heard of the intended voyage she refused to believe it. But when she was really convinced of it, the old impulse was as strong upon her as upon a war-horse who hears the trumpet. "Ja! if I was thirty or forty years younger and could go too!" she exclaimed.

On January 1st, 1840, the tube of the celebrated forty-foot telescope was closed with a sort of family celebration. A requiem, composed by Sir John Herschel for the occasion, was chanted, and he and Lady Herschel, with their seven children and some old servants, walked in procession round it, singing as they went. On hearing of this from Slough, Miss Herschel recalls that the famous telescope had also been inaugurated with music. "God save the King" had then been sung in it, the whole company from the dinner-table mounting into the tube, and taking any musical instruments they could get hold of to form a band and orchestra.

The most laborious of all her undertakings she accomplished after her brother's death. It was "The Reduction and Arrangement in the form of a catalogue, in Zones, of all the Star Clusters and Nebulæ, observed by Sir W. Herschel in his Sweeps." It was for this that the gold medal of the Royal Astronomical Society was voted to her in 1828.

All through her life in Hanover, she lived with the most careful economy, seldom or never consenting to draw upon Sir John Herschel for the annuity of £100 that had been left her by her brother. She said it was impossible for her to spend more than £50 a year without making herself ridiculous. The only luxuries she granted herself were her concert and opera tickets, and her English bed, which all sufferers from the inhuman German bedding must be thankful to hear she possessed. The self-forgetfulness and devotion to others which had characterised her in youth accompanied her to her grave. Every detail with regard to the disposition of her property and the arrangements for her funeral had been made by herself, with the view of giving as little trouble as possible to her nephew, and making the smallest encroachment upon his time. In her latest moments her only thought for herself was embodied in a request that a lock of her beloved brother's hair might be laid with her in her coffin.

WOMEN OF OTHER COUNTRIES.

BY JANE S. CLARKE.

India.

It may, perhaps, seem scarcely necessary for us to ask for the sympathy of mothers for the native women in India, for wherever their actual condition has been made known, women have gladly done all they could to improve it. But when it is remembered that the Queen's Indian Empire is as large as all Europe (excluding Russia), it will be felt that the comparatively few who have devoted themselves to work in India have a formidable work before them, and that they require all the sympathy and help we can give. The great difficulty against which we have to contend in India is the early marriage of the girls, and enforced widowhood. It is not surprising that the parents wish to get their daughters married, when their religion teaches them that "a mother, father, or elder brother who has failed to give a grown-up girl in marriage shall go to hell."

Rather than run the risk of the direful consequences predicted in case of a daughter being unmarried, they will marry her to an "old man, a sick man, a dead man, or even a plantain tree." In the hot climate of India a girl reaches her physical maturity at about the age of twelve, and a boy at fifteen, and we cannot help realising how terribly these religious customs must interfere with the growth and development of the people. It is some comfort, however, to know that, although these marriages are arranged by the parents, and that the bride and bridegroom do not even see each other until the wedding ceremony, it is said that "the love and fidelity of the Hindu wife is above all praise." But

INDIAN GIRL DANCING IN THE ZENANA, THE WOMEN'S PART OF THE HOUSE.

it is rare indeed for the wife to be the companion of her husband, and the higher her rank the greater the restrictions that are laid on her freedom. She is never allowed to laugh, and to talk only to a very few gentlemen besides her husband, and she has to hide her face even from some of her nearest relations. Nevertheless, the wife in India has greater legal protection than in England, and in case of the husband obtaining a divorce, he has to return her marriage portion. In case of illness, a respectable Mohammedan husband would rather let his wife die than allow a doctor to see her face. He has, indeed, been known (in a case of extreme illness) to allow his wife to be placed behind a curtain, and her hand put out for the doctor to feel her pulse, but it was, even then, *covered with thin muslin;* and we have heard that such a gentleman has allowed his wife to put *her tongue through the curtain* for the doctor to see. But it is terrible to think of the suffering and death that is occasioned amongst Indian women by these cruel customs. We are thankful indeed that women are now being taught and duly qualified for the medical profession, and that not only lady doctors, but trained nurses, are being sent to India from both England and America.

But if the condition of a native wife calls for our help and sympathy, how much more does that of the poor widow! The very thought of a woman being left a widow brings a certain amount of sympathy in Christian countries, but in India a mere child, an infant, who has never even seen her husband, may be left not only to a lonely, but to a truly miserable life, considered as "*laksmichara*" (forsaken of fortune), and as a burden on the family.

Directly the husband dies, his widow has to take off her bangles, and all her ornaments and bright clothing, cut her hair short, and wear plain dark clothes. She has only one meal in the twenty-four hours, and has to keep the fasts that occur each month. A Bengal lady who had become a Christian, thus describes her feelings when as a Hindu widow she had to observe these fasts: "I felt as though life were going out of me. My hands and my feet became powerless. In hot weather thirst was very distressing; sometimes water was put on my feet; that lessened my sufferings a little."

When it is remembered that for these girls even to *think* of marrying again is a disgrace, and that they become the drudges of the family, every mother will feel deep sympathy with them. They, poor things! sometimes in sheer desperation, rush away from the miseries of home to the more terrible miseries consequent on a degraded womanhood.

It is not at present in the power of the Government to interfere with these social customs, and as Lord Reay pointed out at the Poona High School for Native Girls, "the means to improve the condition of women in India is reform from within." In the work of the missionaries and the medical women, and the spread of education amongst the women themselves, lies the true hope of a speedy answer to the "Piteous Prayer from behind a Lattice," that the curse may be removed from the women of India.

OUR NEIGHBOUR, WIDOW YATES.

BY GRACE STEBBING.

CHAPTER VI.

SANDY ASKS A QUESTION.

As Jim Stokes tossed a newspaper in at Sandy's cottage-window Freddy sprang from his seat at the tea-table, and picked it up with eager curiosity. His mother was almost as eager to see what this fresh treasure might be. One sugar-plum of news had whetted their appetites for more. But both were equally disappointed to find Jim's gift was "only another *Peterson Gazette*."

However, as one hand dropped it again, another hand was ready enough to take possession. Molly took greatly after her father, and Molly's quick ears and ready wits had caught and seized the significance of Jim Stokes's parting mutter, "There's two bits in it."

Rapidly, the nimble little fingers turned and twisted the sheets backwards and forwards, and inside out, brown eyes running their glances up and down the columns yet faster the while.

"Whatever are you looking for, child?" asked her mother.

"Whatever do you expect to find?" asked her brother.

"I'm looking for—I expect to find—" replied Molly, in spasmodic jerks, from behind the paper, as it crackled and twisted and turned—

"Expect to—to find—" then, all in a moment, a sudden change, a pair of sparkling eyes emerging above the *Gazette*, and a triumphant voice shouting with excitement and delight—

"I'm looking for, and expect to find what I have found. Some more about the accident and father. It is only just a little bit—a few lines—nothing like so much as what Freddy has read; but it is very nice."

And very, very nice the wife's heart pronounced the paragraph, as her eldest child read it out:—

"It was confidently reported that the railway directors intended to testify, in some practical manner, their appreciation of the important services rendered by the promptitude of the porter Yates on the night of the 5th inst. Rumour also declared that the gratitude of the passengers by the two trains, which he had been instrumental in saving from destruction, was to be exhibited in some substantial form."

"You must make haste and get well again, dear, so that I may feel really able to delight in all the good things that are said about you," said Mary, as she stood beside her husband's bed in the hospital an hour or so later.

She had been half laughing and half crying as she told of the many kind-hearted neighbours who had called at the cottage, armed with copies of the *Gazette*, while she and Molly were clearing away the tea-things.

Sandy's eyes grew moist for sympathy, and his pale lips smiled.

"You are evidently taking to the gentlefolks' fashion, Mary, now you are rid of me for a bit; and this has been the first of your "at home" days, I suppose."

Mary laid her hand on his lips, and a tear fell upon his hand at the same time, as she retorted—

"If you don't take care, sir, and get well again very soon, I shall think twice before I will go on having any more "at home" days, even for myself, for I shall just take up my abode here."

"Foolish lassy," said Yates, "you ought to be quite glad to be quit of me for a while, and free of all the fash and trouble I cause you. For weeks to come ye'll have no holes to mend in my socks, for one thing."

But the reminder of that especial one thing was unfortunate for his wife's self-control. Losing all further power to smile, or even to find alleviation, to some degree, for their misfortune, in people's kindness and commendations, poor Mary hastily dropped down upon her knees by the bedside, and gave way to a desperate fit of sobbing over her husband's broken leg.

"Hush, hush, lassy dear," remonstrated Sandy in a troubled voice.

The pleasant news had been rather too exciting for his weakened strength, and his wife's outburst of grief threatened to be quite too much for him. But a friend was close at hand.

"Hoity-toity, what's the matter here?" asked some one, coming up to the foot of Sandy's couch. "Have you been beating your wife, Yates? I could not have believed it of you!"

The remarks were made so gravely that they had a magical effect upon the sobs. Mary was on her feet again in a moment, and rubbing away the traces of tears, as she ejaculated most indignantly—

"I should think that you couldn't, indeed, sir. How can you suppose ——?"

But by this time Mary discovered that both Dr. Clover and her husband were laughing at her, and she broke off her partizanship of Sandy in a blushing hurry, perhaps feeling some small temptation to beat him for smiling at her foolishness.

Dr. Clover laid a hand kindly on her shoulder. "You keep up your heart, Mrs. Yates, and go home and have a good night's rest. This new patient of ours is going on in first-rate style, and really, to tell you the truth, I should feel tempted to go in for getting a broken leg myself, if it would bring me in its train all the fine compliments that are being lavished from every quarter upon your husband."

Mary looked up gratefully at the friendly speaker, still her lip quivered as she answered—

"But yet, doctor, he do look very pale and pulled-down like, don't he?"

"Pale and pulled down indeed!" was the cheerful return; "why, to be sure he does, and let us be thankful for the mercy that it is so. Why, my good creature, would you like to see him with red cheeks just now, and all the other marks of fever! Eh?"

The anxious wife grew pale, herself, at the suggestion, but all the same she returned home greatly comforted by this implied repetition of Dr. Clover's belief, that her husband was in as satisfactory a condition as could be reasonably expected under the circumstances.

And the days and weeks went by, and, as at the beginning, so throughout the whole course of Sandy's time in the hospital, both doctors and nurses were unanimous in assertions that his progress towards recovery began from the time his leg was set, and continued up to complete convalescence, without any retarding complications, in spite of that first hour's unselfish ill-treatment which he had himself compelled it to undergo.

"Your own patience and equable temper, Yates, have nobly helped our efforts on your behalf," said the surgeon in chief attendance upon him one day.

Sandy blushed, almost as his wife might have done, as he sheepishly muttered his "I thank you, sir, for saying so, but I'm afraid I've been an awful deal of bother to you all."

There was a more fervent tone in his voice, as he added—"And indeed, sir, I do hope you know how deeply grateful I feel. Out, as well as in, I shall never cease to pray that you may be blessed for all your goodness to me."

"Tut, tut, tut," replied the surgeon, but with an expression of countenance that quite belied the apparent impatience of the ejaculation. "Don't turn flatterer, my good fellow. I was a crusty old bear when I was a baby—at least, I suppose I must have been a crusty young one, then—and I'm a crusty old bear now, with nothing good about me but my eyesight, like Red Riding-Hood's wolf, and my growl. When you go out cured, to-morrow, I, at least, shall give your own good temper a great share in the credit of it."

"Thank you, sir," said Sandy, once more. "I'm sure it's very good of you to say so. And please, sir, as it is so close upon the time when I'm to go out, would you mind my asking—I mean—I—I—"

Whatever he meant, he seemed to find a good deal of difficulty in stating it, and the surgeon rather stared as he said—

"Speak up, my friend. Ask anything you have in your mind. Whatever my general bearlike tendency, I do not feel inclined to take a bite at you. What is it that you do mean?"

"Only, sir, only—" still some hesitation, then a determined dash at the matter—"I mean, sir, do you mind telling me if you really do think that I am really cured?"

The surgeon's eyes opened wider than even before. "Why, Yates, what a queer fellow you are! So resigned to whatever might be going to happen when you were first brought here, in pretty nearly as bad a state as possible; so calm and brave all through; and now, when the tiresome affair is all brought to a satisfactory issue, you are actually turning fainthearted over yourself!"

Sandy shook his head quietly, but his companion either did not see, or, if he saw, did not believe the denial, as he added—

"Well, well, after all, there is nothing in the circumstance that really ought to surprise me so much. Hospitals are splendid institutions, but I am always ready to admit that the greatest kindness we can show our convalescents is to turn them out of the somewhat depressing atmosphere as quickly as we can. You are not the first patient who has only begun to have doubts about his own state of health, when there was no longer anything the matter with it."

But although the surgeon spoke in this positive sort of fashion to Yates, his patient's question recurred to him several times during the next few days, and when next he and his friend, Dr. Clover, were together, he brought up the subject to him.

"With regard to most men," he said, "I should not give the thing a second's thought, but Yates is, after all, hardly one of those to get a fanciful megrim into his brain."

"No, no," agreed Dr. Clover, slowly. "Still, his wife tells me she has most satisfactory accounts from her mother of his enjoyment of his present country holiday. Perhaps he was feeling rather nervous about the approaching ordeal he is to go through."

Mr. Clarke smiled, with a reassured countenance.

"Ah, very probably. I had forgotten that. I know he had heard about it that morning, and he is a very shy fellow. The directors would have shown him more real kindness if they had sent him whatever they intend, instead of making their approbation into rather a difficult pill for the poor chap to swallow, by summoning him to appear before them all!"

CHAPTER VII.

SANDY PREACHES A VERY SHORT SERMON.

Dr. Clover and his friend, the surgeon in chief at the Peterson Hospital, were quite right in their conjecture that Sandy Yates would rather have made a present to the railway directors than go through the ceremony of publicly receiving one at their hands. But then—as Mary Yates said—

"'Tisn't every one as likes things done in a hole-and-corner way, so to say, you know, dear."

"Mary Yates doesn't, for one, at any rate," smiled her husband, rather ruefully.

"Not where you are concerned, and the honour to be done you, of course, you dear old man," was the retort. "Why should I? Besides, I am sure it sets a good example, and an encouraging one, to bring those to the fore who do well, and to let folks see that good deeds are recognised."

Sandy smiled as dubiously as before, and shook his head. "Ah, lassy dear," he said, gently, "don't you think we had better not drag that thought in, if we only do it as a salve to our consciences. Belike, they may be telling us privately that there is some danger lest we should become 'puffed up beyond measure' with all this talk."

As far as Sandy, himself, was concerned there was no danger of anything of the sort. But he could not avoid some degree of fear on behalf of wife and children, when he perceived repeated little signs of their growing elation.

With one embued, like Yates, with the true spirit of Christianity, this circumstance naturally added something to the personal dislike he felt for having himself and his simple family forced into a position of general notice.

"And I most truly do not believe, either, whatever folks think, that I am quite up to a lot of turmoil yet, my Mary," he said, one evening, as the presentation day drew close.

Mary looked up from the basketful of small socks rather anxiously. And, at any other time, she might have been willing to confess that her husband really did not look as thoroughly 'quite well again,' as she tried to believe.

But now—with all this triumph close at hand for her half-idolized husband, how could she admit anything that should lead him to forego it! How could she, even for the neighbours' sakes, admit anything that should tend, not only to her own disappointment, but to the disappointment of their kind intentions as well. For the Peterson folk had taken it up as an affair for the town as much as for the railway authorities, and there would certainly be an hour's regular stir in the place all about Alec.

"Everyone" would be round the doors of the little town-hall that coming afternoon, to see her Alec go in to be speechified to, and praised, and all the rest of it. And lots of the gentry themselves—

"But there! What nonsense to go on arguing like this with her own thoughts, as if she actually did suppose there was anything the matter with Alec, except nervousness!" wound up Mary, at last, quite angrily.

"The foolish fellow was as shy as two-year-old Charlie. And as for looking a trifle pale, well, most people did before they got their rest after a hard day's work. Not but what she didn't doubt as it was a touch of the November fog had got into the room, as much as anything, which always made people seem yellow complexioned."

With this conclusion to her silent meditations, Mary got up from her chair, and, crossing the hearth to her husband, she put her arms lovingly around his neck.

"Dear old man," she said, with a soft laugh, "don't you

fidget yourself about Thursday. Twenty years hence I can just fancy, now, how I can see you laughing finely over the ways you tried to get out of having a bit of honour done you."

Mary thought she detected the faint sound of another low sigh. She lifted her cheek from the brown curls and kissed them, as she added—

"And think, dear, how useful for our children, it may most likely be, to have had their father's worth so publicly recognised! And how good, too, to have your good example so plainly set before them, and to see such encouragement to act well and unselfishly."

Alec Yates raised his head from his wife's shoulder, and stood up with his arm round her waist, looking down upon her gravely, and with evident anxiety.

"What is it now, dear?" asked Mary.

"I want you to add an extra prayer, my dearest," was the unexpected answer, "to those you usually offer up."

"That you may grow——"

Mary checked herself hastily, and then continued: "That you may keep quite strong again in future, do you mean, dear? That would be no extra."

It was the husband's turn to bestow a kiss now, as he said: "No, indeed; I am sure of that. But I was not thinking of bodily health, this moment. Do you remember, dear, dear lass—do you remember Who it is who says, 'Take heed that ye do not your righteousness before men, to be seen of them; else, ye have no reward with your Father which is in heaven'? 'When, therefore, thou doest alms, sound not a trumpet before thee, as the hypocrites do in the synagogues, and in the streets, that they may have glory of men. Verily, I say unto you, they have received their reward.'"

There was perfect silence for some seconds. Then Mary ventured a half timid——

"Still, we are bidden to let our light shine before men, that they may see our good works, and glorify our Father which is in heaven."

"Ah, dear, that is just the thing. See our good works to the glory of the Author of them, but not see them to the glory of ourselves. There lies the difference. May the dear Lord, indeed, grant that our children may love the performance of good works. But if their chief motive for doing them is the hope that their neighbours will glorify them for their doings, I don't think as they'll be worth much, do you?"

As the answer did not seem very ready to come, Yates added, in low tones: "The heart is so deceitful that it seems to me none of us can be too careful to heed that what we mean for our good deeds aren't covered with darkness, instead of light, through pride in them, and vanity. But, look up, little wife. I won't disappoint all the friendly kind wishes at the last hour, like this."

"Please, don't," begged Mary.

In spite of a secret consciousness that the small sermon had been needed, she could not at once give up the lately nourished longing for her husband to have this glory of men that was offered him.

"All right," said Alec, in a lighter tone. "Then it is finally settled now. But, do you know, old lady, I have a very vivid impression that Thursday is nothing but the fifth of November, and that I am nothing more nor less than the new Guy Fawkes?"

"How can you!" ejaculated Mary, accompanying the exclamation with a slight shaking, and with a wind-up laugh she put out the lamp, and went to bed and to sleep, where a dream, as sweet as sad, visited her brain.

CHAPTER VIII.

SARAH STOKES PLANS EVIL.

"THE twelfth of November, and a sun shinin' like as 'twere doin' honour to a day in June."

"Ah, well, we'll take it as doin' honour to our mate, that lucky chap, Yates."

So spoke two railway porters, about eleven o'clock on the eventful Thursday to which Mary Yates had looked forward so eagerly. The men were enjoying a short spell of leisure on the bridge, smoking, chatting, and nodding to such of their acquaintances as passed.

One of the nods was bestowed at this moment upon Sarah Stokes, but with no very great appearance of cordiality, as she sauntered along with a market-basket, wearing as draggle-tailed an air as herself.

"I reckon, Sal Stokes, as it will take you some time to rig yourself up fit for the gentlefolks' eyes," said one of the men, "before you go up to the town-hall this afternoon to see Alec Yates get his testimonial."

Sarah Stokes waited till the sentence was finished, and then she turned upon the speaker, as if she were meaning to bite him.

"I get myself up, indeed, in honour of the Yateses!" she almost screamed, in rage. "D'ye think I'd clean myself in honour of him and his pasty-faced sneak of a wife; I'd be hanged first."

"I shouldn't think it at all unlikely you may be," retorted one of the porters, with a rough laugh. "Don't believe you could get clean if you tried, now. Soap and your skin ha' been strangers too long to make friends in a hurry. And as for calling Yates's pretty wife 'pasty-faced,' indeed—Go home, and look at your own face in your glass, if you've got one. You'll see a dirty yellow, then, if you've never seen one before."

Sarah Stokes did go home, and she did look in the cracked bit of glass, which was all that a drunken fit of passion had left her of a good mirror. And as the woman looked, a momentary shock passed even through her own frame at the terrible depth of the wicked hatred gleaming in her eyes.

But she was in no mood to heed this flicker up of a dying conscience. The porter's taunting, disparaging comparisons between herself and the object of her special jealous dislike had added a quite unneeded venom to her malevolence, and her one object now was to gratify it. At that hour she felt that she really would almost risk hanging to do so.

Meantime, Mary Yates bustled about the cottage, with her clever little aide-de-camp, Molly, in the gayest possible spirits, little thinking that she had so great and unprovoked an enemy.

Everything about the cottage—floors, flowers, furniture, and food—must be in best condition to do honour to her husband's gala day. And as for herself and the children, of course, they must be dressed in their best before they sallied forth to the town-hall.

Whether they were only another proof of the proverb that "fine feathers make fine birds," or whether it was owing to their joyous faces and glad hearts, certain it is that Mary and her five children looked as handsome, bonny a family as any man could wish to own, as they turned out of their garden-gate at two o'clock that afternoon.

"Everything is ready for our feast-day tea when we come back, I think, Molly, dear, is it not?" said Mary, pausing a moment with the latch-key in her hand, before dropping it into her pocket.

Molly nodded brightly. "Yes, mother, quite, I am sure.

Except, of course," she added, with a smile, "putting the kettle on to boil, and lifting the cover off the cake."

"Shall we all have cake to-day, mummum, like Sunday-days?" put in Charlie—dear little Charlie, poor little boy!

Mrs. Yates looked down at the handsome, bright baby face, and the smile on her own grew still brighter as she answered—

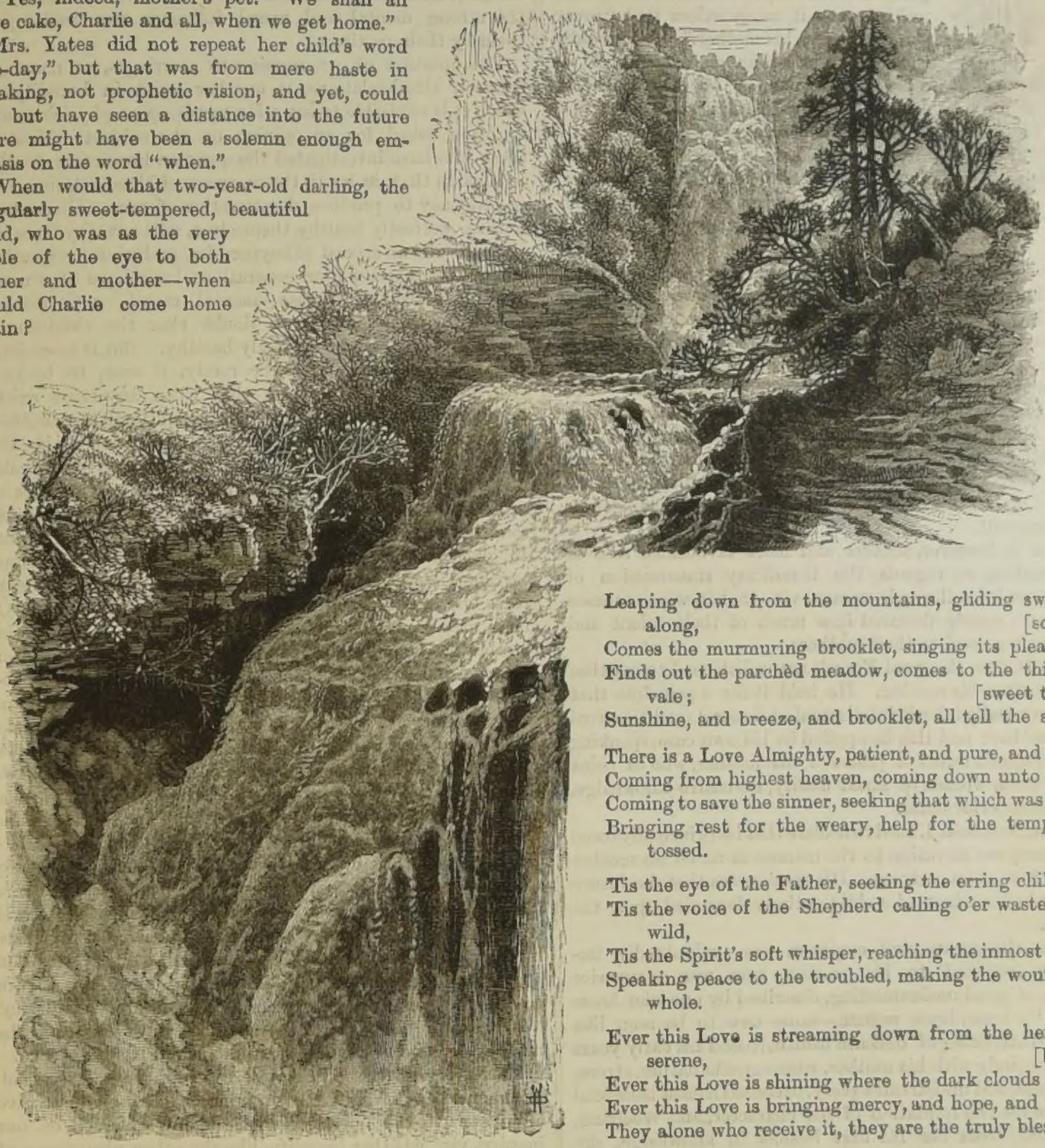
"Yes, indeed, mother's pet. We shall all have cake, Charlie and all, when we get home."

Mrs. Yates did not repeat her child's word "to-day," but that was from mere haste in speaking, not prophetic vision, and yet, could she but have seen a distance into the future there might have been a solemn enough emphasis on the word "when."

When would that two-year-old darling, the singularly sweet-tempered, beautiful child, who was as the very apple of the eye to both father and mother—when would Charlie come home again?

When—still more solemn "when," question all unanswerable by mortals—when would Sandy Yates, the railway porter, see that most sweet and beloved child again?

The only thing that human creatures could at all venture to aver would be that when father and child did again meet it must be assuredly at home. *(To be continued.)*



SEEKING.

PEEPING in at the dawning, sunbeams so pure and fair
Seek to enter my chamber, making a glory there!
Leaving their own high dwelling, finding my lowly room,
Coming with warmth and brightness, gladness to give for gloom.

Stealing in through my casement, breezes so fresh and free
Bear on their wings untiring Nature's sweetness to me;
Leaving the fragrant forest, leaving the briny shore,
Seeking my soul to quicken, cheer, and revive once more.

Leaping down from the mountains, gliding swiftly along, [song;
Comes the murmuring brooklet, singing its pleasant
Finds out the parchèd meadow, comes to the thirsty vale; [sweet tale:
Sunshine, and breeze, and brooklet, all tell the same

There is a Love Almighty, patient, and pure, and free,
Coming from highest heaven, coming down unto me,
Coming to save the sinner, seeking that which was lost,
Bringing rest for the weary, help for the tempest-tossed.

'Tis the eye of the Father, seeking the erring child,
'Tis the voice of the Shepherd calling o'er waste and wild,
'Tis the Spirit's soft whisper, reaching the inmost soul,
Speaking peace to the troubled, making the wounded whole.

Ever this Love is streaming down from the heights serene, [been,
Ever this Love is shining where the dark clouds have
Ever this Love is bringing mercy, and hope, and rest;
They alone who receive it, they are the truly blest.

Has the sunshine eternal woke me from earth-bound dreams?
Have I drunk of the waters flowing in living streams?
Have the breezes of blessing brought me fragrance from heaven?
Let me ever be giving what to me has been given.

Let me be ever seeking—seeking to help and cheer,
Seeking to light the wand'rer out in the darkness drear,
Seeking to show to others something of that free Love
That has found out my dwelling, drawing my heart above.

SARAH GERALDINA STOCK.

NOTES ON HEALTH.

Heredity.—Part III.

BY MRS. ATKINS, M.D.

THE influence of the mother upon the child brings before women a very interesting portion of heredity. Michelet, the French writer, states it as an axiom that "every son takes after his mother." Undoubtedly this is too sweeping an assertion if we consider the number of exceptions we meet to such a rule. Nevertheless, we find in history, in medical practice, and in daily life, numerous facts in support of the assertion that the sons resemble the mother, whereas the daughters resemble the father. One very ungallant writer declares that the fact of the resemblance of the sons to the mother explains why so many great men have mediocre sons. Thus, in our own country, as regards deficient mental heredity from a great man, Cromwell's wife, who is described merely as a woman of gentle disposition, is held responsible for the nullity of her sons, whom one writer stigmatises as "Arcadian shepherds." His daughters, on the other hand, were more fanatical than himself. Again, the son of Napoleon I. seemed to inherit all his mother's weakness and folly. Certainly he died young, and it is perhaps scarcely fair to judge him, but up to the time of his death he gave no promise of his father's genius or strong will.

There is, however, another and more favourable side of the question as regards the hereditary transmission of mental qualities through women, viz., that in which famous men have openly declared how much of their talent and success they owed to their mothers.

Thus Buffon, the great French naturalist, used to say that he took after his mother. He held it for a principle that children usually inherit intellectual and moral qualities from their mother; and this he applied in his own case, speaking in the highest terms of praise of his mother, who in point of fact was a woman of much ability, extensive knowledge, and of a superior mind.

Again, Napoleon I. used to declare that he principally owed his subsequent elevation to the manner in which his mother formed him at an early age. His opinion was that the future good or bad conduct of a child entirely depended upon the mother.

Watt, the great civil engineer, was undoubtedly immensely indebted to his mother, who was a superior woman, of good understanding, described by one who knew her as "a braw, braw woman—none now to be seen like her." Watt, being of delicate health, passed his early years almost entirely with his mother, whose gentle nature, strong good sense, and unobtrusive piety, exercised a most beneficial influence on the formation of his character, and receiving, as he did, from her his first lessons in knowledge, she certainly influenced the physiognomy of his plastic mind.

Cuvier, the great geologist, is another instance of a mother's influence over her son. He was not only taught to read by her, but she learnt Latin in order to assist him in his later studies, and had the satisfaction of finding that he was always the best grounded boy in the school he attended. She also laid the foundation of drawing and literature in his mind, and so helped him in all his studies that he attributed a great portion of the success he achieved to her efforts. Even in his later years, and amid all the occupations of his active life, Cuvier never forgot the care of this excellent woman during his delicate childhood, cherishing every circumstance connected with her memory, and loving to dwell upon objects, however trifling, which reminded him of her.

Beyond these we have Goethe, Bacon, Schiller, Burns, Chénier, and many other celebrated men, who all testify to the strong mental and moral influence exercised upon them by their mothers.

The question of consanguineous marriages, or marriage between blood-relations, is another point in heredity on which it is advisable to say a few words, as we physicians are so often asked for an opinion on the subject. Most of those who have investigated the question have come to the conclusion that, in itself, the marriage of blood-relations has no tendency to produce degeneration of race. Given two cousins, perfectly healthy themselves, without any trace of disease, with no special idiosyncrasies, and whose respective families for three or four generations back have shown no trace of hereditary disease—mental, moral, or physical—and there is no reason to doubt that the children of the two cousins will be perfectly healthy. But it is evident that such conditions are very rarely, if ever, to be met with, and it is quite certain that when any taint exists in either of the cousins—still more when it exists in both—that taint will be strengthened and developed in the children, and consequently such marriages ought, for the sake of the offspring, to be strictly forbidden. The statistics so carefully and laboriously gathered together by Dr. Bemiss from his own practice, are very conclusive on this point. He gives us the result of his investigations of thirty-four marriages between cousins. From these thirty-four marriages one hundred and ninety-two children were born. Of these, fifty died in childhood, of consumption and water on the brain. One hundred and thirty-four of the children grew up, and out of this number only forty-six are reported as healthy. Thirty-two are set down as deteriorated, and the remainder are reported as suffering either from scrofula, or epilepsy, or insanity, or deaf-mutism, or idiotcy. It is fearful to think that out of one hundred and ninety-two human beings brought into the world, without their permission being asked, only forty-six, or about one-fourth, should be healthy. Surely such a responsibility on the part of parents is not to be lightly considered! more especially when we realise that parents suffering from scrofula, consumption, or cancer, may not only bring into the world children who will probably suffer from the same complaints, but that these diseases, as already stated, may appear in an aggravated form in the children, so that scrofula will turn to consumption, hysteria or neuralgia to insanity or idiotcy. We probably all of us know instances in which, from the marriage of two first cousins, an idict child has been born.

We have now passed in review cases of mental, physical, and moral heredity sufficient in number to enable us to give an answer to the questions with which we started on our inquiry, viz., whether heredity, like the other phenomena of life, is governed by any laws. Even the few instances adduced must have convinced the most sceptical that there is something more needed than mere accident or chance to explain the mental, moral, and physical resemblances between children and their parents. Accident will not explain the musical talents of the Bach family extending through eight generations; nor the beauty of the Linleys, extending through three, if not more, generations; nor the porcupine covering of the man, Edward Lambert, lasting for at least three generations; nor the fearful instances of

hereditary drunkenness and suicide returning again and again in the same family. If not to be explained by accident, then, there must be some law governing this heredity, a law, truly, with many exceptions, a law modified by the mother's influence before the child is born, by diet, circumstances, education; above all, modified by what we have already considered, viz., the transformations of heredity, as when the children of an hysterical mother become epileptics or lunatics—a law, then, modified by all these circumstances, but still a law, which may be broadly stated in the following words: "Like produces like; the progenitor is repeated in the descendant." Such being the case, we come to the second question we propounded at the commencement of this subject: What duties does this law entail upon us, both as regards ourselves and our children? This rule can be summarised in a very few words—words which have guided the noble ones of the earth for many centuries, words which condense more practical goodness in them than the folios of sages—words which, however, we have so often heard that they have become almost meaningless to us, "Do unto others as you would they should do unto you."

What woman, taking those words as the rule of her life, will marry a man in whom or in whose family is some hereditary taint, simply because he is rich, or of good family, or even because she loves him, knowing, as she does, that in all probability she will bring into the world children in whom the father's hereditary taint will appear in an aggravated form? What woman, bearing this rule in mind, will not struggle against any weakness in herself, be it hereditary or acquired, be it mental, moral, or physical, so that if she should become a mother, she may feel she has done all that lay in her power to bring healthy, and consequently happy, human beings into the world?

What woman, looking into the future, and thinking of future generations, whose health and happiness depend upon her, will encourage or even allow her daughter to marry a man who is known to have been a rake, or, as it is delicately worded, to have "sown his wild oats," knowing, as she must know, nowadays, the real meaning of those words—the deteriorated state of health they imply in the man—the certainty of disease he entails upon his children? Some people think and say that women have not sufficient influence. To me, on the contrary, it seems that the influence women, and especially mothers, possess, and its consequent responsibility are fearful to contemplate. "Cast forth thy act, thy word into the ever-living, ever-working, universe, it is a seed grain which cannot die unnoticed to-day, it will be found flourishing as a banyan grove (perhaps alas! as a hemlock forest!) after a thousand years."* If this be true of every human being, how much more true of women who are mothers! Heredity has shown us that the influence of the mother upon her child commences before its birth, in that the defects and virtues she has allowed to grow within her will almost surely, in one form or other, be transmitted to her child. That her influence for good or evil will be impressed upon her child, there can be no shadow of doubt, and surely such an influence—which may make or mar not only one human soul (although that alone is a terrible responsibility), but may also be exerted upon generations still unborn—is influence enough for one poor fallible mortal!

And yet, how many women, when they marry and have children, realise the terrible responsibility they are taking upon themselves? How many women prepare themselves for such responsibility by striving to attain to the highest standard of health, both moral and physical? How many women have any knowledge of the laws of heredity, which yet in many instances would give them the key-note to their child's mental, moral, and physical peculiarities, and thus enable them to counteract the evil and foster the good tendencies latent within it.

No! what we women who are mothers need is not more influence—for ours is deeper and more widespreading than that of any other single individual—but better directed influence; and to attain to this we must teach and train ourselves—not adopting the absurd conventional idea that motherhood, the holiest, the greatest, the best work which a woman can undertake, is to be entered upon without so much training as we should undergo if we intended to be dressmakers. Better far that we should have to do with an incompetent commander-in-chief, even in time of war, than with an incompetent mother. The former may send his soldiers to useless massacre and death, and great for a time will be the grief caused. But *only* for a time! the dead men's places will be filled, and they themselves will do no harm to others. But the mother who sends into the battle of life a child deteriorated, either morally or physically, cannot tell where the evil originating from that one child may end, and how many thousand years later the seed which he sowed may not be flourishing like the hemlock forest, destroying all who rest beneath its shade.

So long as the fatal idea prevails that all women by right of birth are fit to be mothers, so long shall we see around us, as we all, but more especially we physicians, do now, the grievous results, both moral and physical, of the misdirected influence of ignorant mothers upon their children. But we hope the time is coming when the spread of education, and consequently of thought, will show women that motherhood is a profession—the best and highest a woman can enter, and that, just as for any other, and more than for any other, profession, she requires training ere she dare to enter upon it.

If these few notes, however inadequate, tend to make even one woman realise this fact, or prove of assistance to one mother in her arduous task, our end will have been attained.

* Carlyle.—"Sartor Resartus."

MARION'S HAPPY THOUGHT.

BY EDITH C. KENYON,

Author of "Daring Tom," etc., etc.

"WASN'T it all nice, Harry, that the gentleman said?" exclaimed a little girl to her brother, as a number of children came out of a large room where a very happy children's service had just been held one Saturday afternoon.

There had been a Mission in the little town of Normpton, and a stranger clergyman had been preaching very eloquently to the little ones.

"Yes," said Harry, slowly, looking very much impressed, but as if he half wished to hide what he felt; "yes, it was very good, Emmie."

"Oh! it was beautiful!" cried their older sister, Marion; "I never knew anything like it. He made it so plain that the Lord Jesus loves us, and we are to try and do all we can for Him."

"Yes, and he said He would be pleased with little things if we did them for Him," said Emmie, wistfully.

"But what is there *we* can do?" questioned Harry; "it isn't as if we were grown up, like mother."

"But the gentleman said little ones could do little things," said Marion, "and he said there was a little girl who once gave away her orange to a sick child who wanted one so much; and he told that story about the little boy who gave his only penny to the missionaries, and he said all such things were giving to Jesus, who took the little gifts and blessed the givers."

"But I don't know what I can give," said Emmie, wistfully. "I'd like to give something, but I haven't an orange, and I haven't a penny, nor anything."

"Just look how it's snowing," said Harry. "Come on, girls, let's run home;" and buttoning his coat, he seized hold of Emmie's hand and prepared to help her on, for he was a kind boy who always remembered to help his sisters.

"I wish I'd a warm coat, mother; I am so cold," wailed a shivering little urchin, just then, as he passed the children. He was holding a poor woman's hand, and she was looking wretchedly thin and ill.

"Never mind, Johnnie," she replied, "God knows how poorly off we are. He will take care of us."

"Ought I to give him my coat?" said Harry, slowly, to Marion.

She shook her head. "It's father's and mother's as well as yours," she said. "They would be angry if you gave it away."

"Oh, but, poor things, have we nothing for them?" said Emmie. "Can't we give them something?"

MARION KNOCKED LOUDLY AT THE DOOR, WHICH WAS CLOSELY SHUT. p. 45.

"The gentleman said if we had nothing else we could give kind words," replied Marion. And then, hurrying after the poor woman, she said, sympathisingly, "Oh, please, ma'am, could I do anything for you?"

The woman stopped short, looking at her in surprise.

"I don't know," she said, "we are cold and hungry, but we have no fire at home. We are going to Eldon Wood to gather sticks. I have heard that leave has been given there for poor folks to get as many as they like. But I'm afraid I shan't be able to carry many, and this child"—pointing to Johnnie—"is not much use."

Marion's face flushed. A happy thought occurred to her.

"Where do you live?" she asked, breathlessly.

"At No. 8, Wright Street; that block of buildings there," said the woman, pointing to the few last houses of the little town, which they were now leaving behind them.

"And we live just about a quarter of a mile off," said the girl. "Oh! I wonder if mother will let us help you."

"You three," said the poor woman. "What nice sticks you might get me! But then I could never give you anything for doing it."

"We shouldn't want anything," said Marion, simply. "We should be doing it for Jesus, and that would be pleasure enough."

Hurriedly returning to Harry and Emmie, she told them what a happy thought she had had. And the children ran home in great glee to ask their mother's leave to do as she proposed.

Mrs. Ellis, a sweet, gentle-looking woman, smiled loving approval on her little ones as they rapidly told her about the gentleman's sermon, their wish to do something for Jesus, and the poor woman's destitution.

With their mother's hearty consent, the children hurried to Eldon Wood that they might get as many sticks as possible before dark. But, to their surprise, they did not find the poor woman there. However, they remembered where she lived, and having gathered as much wood as they could carry, they took it to her little house, and knocked loudly at the door, which was closely shut.

"She can't be in," said Harry, sitting down on his bundle of firewood, "and I am so tired. What shall we do?"

"Oh, isn't she in?" said Emmie. "Rap louder, Marion."

Marion rapped till the noise resounded through the street. But still there was no answer. However, just then, a dog came up, and stood with its feet on the door-step as if it also meant to come in. Then a gentleman appeared, and, to the children's surprise, it was the same who had addressed them at the meeting.

"Is this the house, Tray?" he said to the dog, and the animal wagged its tail as if it were replying, "Yes,"

"Well, children, are you, too, coming to see poor Widow Blake?" he said.

"Is she the woman who lives here, please, sir?" said Marion, timidly, curtseying as she spoke.

"Yes, I suppose so. Her clergyman was sent for just now, but as he is away I came instead. The dog came to show me the way. But how is it we cannot get in?" And the gentleman shook the door. "Have you been getting her these sticks?" he asked, as he waited for an answer.

"Yes, sir," said Marion.

And then the door opened, and Widow Blake, looking very pale and ill, invited them to step inside. She had scarcely been able to creep to the door, she was so starved. "And I could not come to the wood, after all," she said to the children; "for Johnnie, too, turned very poorly. But, oh, if you have got those sticks for me I shall be so very grateful."

"They are all for you," cried the children; "we gathered them all for you."

"Where is your little boy?" asked the gentleman.

The poor woman began to cry, and pointed to a corner, where her little son lay pale and fainting on his bed. The room was very cold, and there was no fire.

But Marion soon lighted one upon the hearth, while the clergyman fetched some food and sent Harry for a doctor. Emmie did what she could, too, and piled the sticks up in the chimney corner ready for use afterwards.

The doctor soon came to see Johnnie, and then his mother and he had some food, and afterwards the clergyman knelt and thanked God for His mercies.

And oh! how the widow thanked them all as they turned to go away!

The children were very happy, though very tired, as they ran homeward through the snow.

HOW TO FEED A FAMILY.—II.

BEFORE I begin to give directions for our second dinner, you should know how to prepare the best and cheapest fat for pastry, frying, etc., at less than one third the cost of butter.

How to Clarify Fat.

1. Buy two pounds of fat, trimmed from chops, etc., by the butcher, which should cost about fourpence a pound.

2. Cut it into pieces about an inch square, put them into a strong saucepan, with a quarter of a pint of cold water and a teaspoonful of salt.

3. As it gets hot, stir it, and let it simmer till quite clear, stirring it often. It will take about twenty-five minutes.

4. Take it off the fire for two or three minutes, then pour the fat through a strainer into a tin basin. (N.B.—It will crack crockery.)

5. Add the skin, etc., left in the strainer, to the contents of your stock-pot.

How to Clarify Dripping.

1. Cut the dripping into small pieces, and place them in a tin basin (tongue tins are very useful for these purposes), with a teaspoonful of salt.

2. Pour boiling water on them, and stir with a spoon until they are quite melted.

3. Let it stand till cold, when the fat will be on the top in a clean white cake, and the water will be brown.

4. Take the dripping out of the water, cut it up again into small bits, put these into a clean tin, and stand it in the oven till the fat is melted, to dry out the water.

5. Take it out, and keep it in a dry place.

6. Pour the brown water into your stock-pot; it gives flavour and colour to stock.

Dinner II.—Onion Soup.

Materials.—3 large onions; flour, 2 tablespoonfuls; fat, 2 oz.; stock, 3 pints; salt, 2 teaspoonfuls; soda, a lump the size of a hazel-nut; pepper to taste.

How to make it.—Peel the onions, put them into a small basin with the soda, and cover them with hot water from a kettle; let them stand fifteen minutes. Take the onions out of the water and cut them in rings. Put the fat into a saucepan, place it on the fire, and when the fat is quite hot, fry the onions a nice brown. Mix the flour evenly with the stock, add a pint of this to the fried onions, and fry it brown, bruising the onions till the brown colour comes out, with a spoon. Make the rest of the stock hot in another pan, and add it to the fried part, with the salt; boil for ten minutes, stirring often. Serve hot, with thin toast cut into small dice. This soup takes an hour to prepare, and if it is made ready earlier, it must be taken off the fire, or it will burn.

Mutton Pies.

Materials.—Mutton, 1 lb.; potatoes, 1 lb.; 1 onion; flour, ¾ lb.; fat, 4 oz.; a little parsley, pepper, and salt; baking-powder, 1 teaspoonful.

How to make them.—Parboil the potatoes (or use cold potatoes), cut the mutton into small pieces, chop the onion and parsley finely. Make the flour, baking powder, salt, and fat into pastry; grease six tins, line them with pastry, fill them with meat and potato in equal quantities, sprinkle with onion and parsley, pepper and salt, cover them with pastry, pinch the edges together with a floured fork, and bake for an hour, putting them first into the hottest part of the oven for fifteen minutes, then moving them to the cooler part to cook through.

Pastry should always be made in a cool place, with hands just washed in hot soap and water, well dried, and as cool as possible. Pastry should be put into the oven directly it is made, and the oven must be quite hot to make it rise. To test the heat of an oven it is a good plan to sprinkle a pinch of flour on the hottest shelf; if it turns brown in half a minute the oven is hot enough.

For these pies we will cut the clarified fat into small pieces, chopping it a little, then take a teacupful of the flour and spread half of it thickly on a board; lay the chopped fat on it, cover it thickly with flour, and roll it with the rolling-pin until all the lumps are flattened. Then add it to the rest of the flour (with which the baking-powder and salt should be first mixed), and rub it lightly and thoroughly into the flour between your fingers till every lump is gone. Now take a small jug of lukewarm water, and mix it, with a knife, into a thick dough. Roll out half at a time, and handle it as little as possible, keeping the board, rolling-pin, and everything that touches the pastry lightly covered with flour. The pastry should be scarcely a quarter of an inch thick, and the pies must be neatly trimmed round with a knife.

Apple Charlotte.

Materials.—½ lb. apple-rings, or twenty good apples; bread-crumbs, 3 teacupfuls; sugar, 1 teacupful; clarified fat, 1 oz.; 1 lemon; white sugar, 6 lumps.

How to make it.—Soak the apple-rings in cold water over night, and strain off the water. If fresh apples are used, peel them thinly, take out the cores, and cut each in eight bits. Grease a pie-dish well with the fat, line it with bread-crumbs, and fill it with layers of apple, sugar, and bread-crumbs. Squeeze the juice of the lemon over this, and cover in with crumbs. Place a small dish, or tin, over the top, to keep the heat in, and bake two hours, slowly after the first half-hour. Turn it out into a small dish before serving, and cover the top with the white sugar, rolled and sifted.

Although I have given you these directions in the order of the three courses, I should advise you to begin first with the apple charlotte, as this takes two hours to cook; then make the mutton pies, and give the last hour before dinner to the soup, not forgetting to look well to your oven every few minutes.

N.B.—Dry the lemon peel, and keep it for flavouring gruel, stewing with fruit, etc.

Cost of Materials.

Onion Soup.—Onions (3), 1d.; flour and salt, ½d.; fat, soda, etc., 1d.; stock, 0d. Total, 2½d.

Mutton Pies.—Mutton, 1 lb., 8d.; potatoes, 1 lb., 1d.; onion and parsley, ½d.; ¾ lb. flour, 1½d.; 4 oz. fat, 1d.; baking powder, pepper, and salt, ½d. Total, 1s. 0½d.

Apple Charlotte.—Apples, 3d.; bread-crumbs, 1d.; sugar and fat, 1d.; lemon, 1d. Total, 6d.

Total Cost.

Onion soup, 2½d.; mutton pies, 1s. 0½d.; apple charlotte, 6d.; bread, 1½d.; vegetables, 1½d. Total, 2s.

To dine six persons, average 4d. per head.

I. L. Richmond.

GIRLS.

BY SARAH TYTLER.

III.—The Small School-girl.

ANOTHER stage is reached in the little maiden's history. She is no longer a toddling mite, at play all day, with hardly an obligation upon her, save that of unquestioning obedience to her parents and guardians. She is a small responsible person, with duties and engagements of her own. Her first day at school is, in fact, her first entrance, on her own account, into the big world beyond the little circle of her home. What that world is to be to her, whether kind or cruel, depends largely on her little self, and her influence on her own fate in this respect begins with the very beginning. A good start is a great matter, even for a little school-girl. Whether she makes a good or a bad start, there is one thing certain—she takes a step from which there is no drawing back. Her horizon widens indefinitely from that moment. Home with father and mother and, it may be, brothers and sisters, though still—and for a long time to come, we trust—the first, is no longer the only influence in her life. School, with its teachers and fellow-pupils, has its work to do also, and makes many a fresh, strong impression on the youthful mind, in addition to those already engraven there, all but indelibly.

The first school for our little girl is now, as a rule, some form of an infants' school, or *kinder-garten*, with its ingenious mixture of work and play, its clever object-lessons—incentives to observation and attention, those main agents in furnishing the human mind—its wise leading up to trials of skill and neatness in handicraft, its merry songs and pantomimes.

The small school-girl finds herself a person of some consequence, when she is dressed for the occasion, and is supplied with a satchel for her books and working materials. How much pride she takes in that first brand-new school-bag, which, unless it has many successors, is doomed to become, in time, so worn and battered! How she enjoys exhibiting it, as she herself goes round for inspection in this her earliest *debût* in life, and is told by "granny" and "auntie" that *her* first school-bag was of green baize and *hers* of patchwork, while granny's little brother's was long and narrow, of leather, stitched by a saddler, with two straps for his arms, so that the bag hung from the nape of his neck to the small of his back. Grown-up people are moved by the crisis

in the little one's history. Father or mother, with a certain amount of reflected importance, leads the child away on the path which is to her all rosy by anticipation.

The first cloud comes when the school is reached. The friendly school-mistress is interviewed, and the last candidate for her care glances at her fearlessly or fearfully, according to the temperament of the child, and looks round still more doubtfully and shyly on the liliputian crowd of interested fellow-pupils, more or less strange to her. Then the child has her hand unlocked from that of the protector who has brought her to the place, and is left alone in a new and untried sphere.

Awful moment, even for a frank and unquestioning child! It is by a wonderful effort, for such a baby, that she keeps herself from bursting into crying, if she does not absolutely cry. Still, though the momentary sense of abandonment and desolation is overwhelming, there is plenty of consolation in store for her. She has the sense—often so fascinating to children of larger growth—of being the heroine of the hour, the last and probably the youngest pupil. She is soothed, petted, and played with. She is asked to do little or nothing, and applauded for all that she does. In short, the first day, after the first bad quarter of an hour, is almost as nice as she had expected, and she has the triumph of having mastered the situation—of being no longer mamma's or nurse's charge, but a full-blown school-girl, like her elder sisters and her cousins.

It is on the days which are to come that the tug of war is felt, when kindly forbearance can no longer take the place of the necessary discipline, when the little one must struggle, however much against the grain, however tired and naughty she may feel, with the bristling difficulties of the alphabet, words of one syllable, a needle and thread, or a pair of knitting-needles. The gloss of novelty is gone, and she herself is no longer a novelty to her schoolfellows.

A desperate inclination to loiter and hang back in setting off in the morning to the unwelcome goal becomes more and more conspicuous. The child has yet to learn to accept the inevitable and endure the disagreeable. This is one of the most precious parts of her education, so beware, oh, loving mothers and elder sisters! how you frustrate and spoil it. The small girl will suggest with simple guile—innocent enough as yet—many an excuse for not going to school to-day or to-morrow; she will beg off with pretty wiles from the unpleasant tasks; nay, if she has not been well brought up hitherto, or if she has inherited a tempestuous temper, she will break into open rebellion, stamping her little feet, clenching her little hands, and crying that she "tant," or she "ont" go to school. Resist the syren and the vixen alike. Do not weakly yield to her for a day or an hour, unless genuine sickness be the obstacle. Keep her up to the mark. You are not rue friend of hers if you do not. The sooner she learns the lesson which she must learn, if she is ever to do any good in the world, the better for her and all around her. She must be trained to duty, to diligent and persevering effort. Irregular attendance at school is, from the beginning, a serious, well-nigh a fatal drawback to progress. Unfortunately, it cannot always be helped, but where it can, every effort should be made to avoid it.

As soon as a little girl can be safely trusted to go to school alone, supposing there are no brothers, or sisters, or neighbour's children to accompany her, the better for her. She is touched and benefited by the confidence placed in her, which is generally a source of self-respect and proper pride. She learns habits of self-reliance and presence of mind, which are always useful and may be invaluable. It is charming to see the grave simplicity, and unshaken steadfastness, with which a little girl bound for school, or on some errand for father or mother or friend who takes a parent's place, will pursue her way in perfect security through a hurrying crowd, even encounter a difficult crossing, and surmount it successfully, or will patter along country lanes, and across fields, without a thought of loneliness or apprehension, yet hardly stopping to pick a wayside flower, or a hedge blackberry, so full is she of what is due to herself and her sender, so honestly anxious to keep time or to carry the book or the little bundle, which has been given into her charge, intact. We had the opportunity of seeing and admiring such a wise little maid many a time, during a visit to a remote part of Devonshire. Every day she passed our house, and frequently she crossed our path in our walks in the course of her journey of at least half a mile. She was so young that she used to solace herself by sucking her thumb, as she trudged the distance; but nothing would tempt her to do more than barely look at us out of the bright round eyes above the chubby cheeks, shaded by the lilac hood. When a child can thus be put on its own resources, it is prudent to exact from it reasonable punctuality. To come straight home from school, or after being sent to give a message, is a judicious injunction, and when compliance with it is steadily required, a world of trouble and anxiety may be spared. Such a rule need not interfere in the least with the ample time which ought to be allowed for play. A word here on the advantage of abundance of suitable companions, which is generally the child's first attraction to school. There is no doubt at all about the advantage.

But companions represent one thing, and not to be able to do without company—we mean outside the family—has a very different meaning. There ought to be certain rules, capable of special expansion on occasions, laid down for the amount of visiting and visitors granted, even to a small school-girl, whose place of reception is her mother's garden.

With regard to preparing lessons, there is an excellent formula, which should be firmly established and never departed from. The child should be given just so much time as is sufficient for her, with her whole attention engaged, and in accordance with her mental faculties, to learn her lessons. When the half-hour, or hour, as it may be, expires, the book or books must be taken away, and the child sent to something else, whether to play, or to read for her own pleasure, or to do home-needlework, or to help with the younger children. Suppose our little girl does not put all her strength forward, trifles, and has but a partial acquaintance with what she ought to have known perfectly. Next day she will make a poor figure in her class, will lose her place, and be punished. Never mind. It is the best thing that can happen to her under the circumstances. It will make her more careful and busy another time.

Fathers and mothers and seniors generally can help a small girl at school—by taking an intelligent interest in her work, and rejoicing with her in every fresh attainment in it. Let her feel that it is the acquisition of knowledge, and not the gaining of prizes, or even the earning of praise, which is the object of her school life.

A single word more in reference to a child's conscience in learning lessons. Never, if you love her, make light of her work, or treat the neglect of it as a very small matter, even a good joke, sometimes. However insignificant in itself, it is anything save insignificant to the child. It is the main obligation of her young life, the manner in which God has called on her to do her duty—solemn as all duty is, sweet

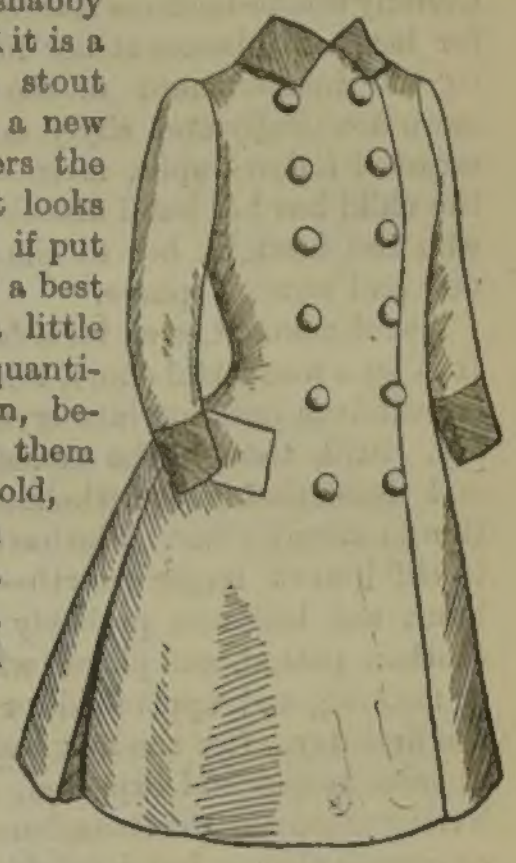
also as every duty, however dry and tedious in the abstract, must be, when done. To learn her lessons as well as she possibly can, and be a good child at school, loyal and respectful to her teacher, kind and obliging to her school-fellows, is a great part of a little girl's religion, and as real a part as going to church or chapel and saying her prayers. In fact, it should be the result of what she hears of her Father in Heaven, and her divine Elder Brother, and whispers to Him, reverently kneeling before her little bed.

DRESS AND DRESSMAKING.

March winds and March sunshine make most of us long to cast aside the dingier ones among our winter wraps, but it is necessary to curb one's fancies in this direction, for even if the sun is warm on our backs, the east wind flies at our throats, and makes it more necessary than ever to take care of them. A silk handkerchief, not too small, nicely folded, and pale-blue or pink in colour, is a capital protection; and gives just a touch of freshness to the toilette, and if bonnets and hats have seen much service during the winter, it is nice to renovate them in the lengthening days with something new in the way of trimming, such as a bow of picot-edged, salmon-coloured ribbon, on a dark-brown bonnet, or a narrow cream or amber ribbon, placed inside each of the black velvet or ribbon loops, and just showing beyond them. The mere fact of taking a bow to pieces, getting rid of the dust with a soft brush, and removing any accumulation of it from the brim and foundation of the bonnet, and putting it all together again, is often sufficient change, and carries us on till it is wise to put the dark head-gear away till the return of dark days, and invest in something more springlike.

Those who have had no new winter gown, a state of things which economical women experience once in every two or three years, begin in March to bethink themselves of one for spring. Very neat is a narrow stripe of grey and black, or a tiny check of black, or brown, or navy-blue and white, with or without narrow panels of the plain colour. The great advantage of a good check is that it can always be taken apart and washed in soft water, and looks as nice as new when made up again, and the remnants are suitable for children's wear. A capital way of making a dress of this kind is with a small V-shaped piece of plain colour, coming from the neck towards the waist. The chin often makes a greasy mark on a light fabric, and then the dress looks shabby at once, but if the precaution of putting a darker one just there is taken, the bodice continues to look clean as long as any other part. A plain full bodice, or blouse, and waistband suit most people, and very pretty leather belts are worn, either quite plain, or in two shades of brown and grey, or in black and white.

A child who has been wearing an old warm coat during the winter, often looks very shabby in the brightening days, and it is a very good plan to buy a stout light fluffy cloth, and make a new coat, which completely covers the frock, is nice and warm, yet looks suitable for the season, and if put away carefully, comes in for a best coat next winter. It is a little difficult to prescribe exact quantities of material for children, because the same shape suits them from five to twelve years old, but two yards double width will make a plain coat for a girl of twelve or thirteen, unless she is unusually tall and womanly. A cloth of this kind requires no lining, and the pattern must be laid carefully on, so as to leave just enough room for the turnings, but not too much, or more stuff will be required. Tack all together, except the sleeves, and try on with the seams outside, so that they can easily be taken in or let out. Then do them up with the sewing-machine, if you have one; open the seams, lay a damp cloth on them, or rub them with a little soap, and press them with a warm iron. Turn up the edge of the cloth round the bottom, and herring-bone it lightly down, so that the stitches do not show through. Run a piece of old silk or Italian cloth, or a strip of old satin ribbon that has been ironed out, down each front, turn it under, and tack down. This is not only a nice finish, but gives something firm for the buttons to be sewn on to on one side, and the buttonholes to be made in on the other. Buttonhole-making is only to be acquired by practice, but well-made buttonholes add very much to the appearance of any garment. Buy silk twist for them, a shade darker than the cloth, cut the holes first at suitable distances, and tack each round with small stitches, making at least three stitches, one over the other, at the end nearest the edge of the front. Then set to work "womanfully" with the proper buttonhole stitch, do it rather fast, and it will form a tiny firm cord all the way round.



The neck-band, or collar, and the sleeves should be the last things added to the coat, and each sleeve should be lined an inch or two up with a piece of silk or ribbon, and the seam that sews them into the coat pressed as flat as may be, and covered with a narrow galloon. This adds to the strength, and enables the coat to go on smoothly over the frock. Smoked pearl or bone buttons are very inexpensive, and always look well on a coat of this kind.

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